

MINOR SOURCE OPERATING PERMIT OFFICE OF AIR QUALITY

**Victorian Homes, Division of Patriot Homes, Inc.
11948 County Road 4
Middlebury, Indiana 46540**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 039-13613-00353	
Original signed by Paul Dubenetzky Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: June 13, 2001 Expiration Date: June 13, 2006

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary manufactured homes assembly plant.

Authorized Individual: Thomas A. Young
Source Address: 11948 County Road 14, Middlebury, Indiana 46540
Mailing Address: 57420 County Road 3 South, Elkhart, Indiana 46517
Phone Number: 219-825-5841
SIC Code: 2451
County Location: Elkhart
County Status: Attainment for all criteria pollutants
Source Status: Minor Source Operating Permit
Minor Source, under PSD Rules;
Minor Source, Section 112 of the Clean Air Act

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

- (a) One (1) coating operation with a maximum coating rate of 2.25 units per hour, consisting of miscellaneous volatile organic compound (VOC) containing adhesives, coatings, cements, and cleaning solvents used to assemble manufactured homes.
- (b) Twenty six (26) natural gas fired forced air furnaces with combined heat input rate of 5.58 million (MM) British thermal units (Btu) per hour, each exhausting at one (1) stack and consisting of the following:
 - (1) eight (8) natural gas fired forced air furnaces, each rated at 0.3 MMBtu/hr;
 - (2) one (1) natural gas fired forced air furnace rated at 0.25 MMBtu/hr;
 - (3) eight (8) natural gas fired forced air furnaces, each rated at 0.20 MMBtu/hr;
 - (4) four (4) natural gas fired forced air furnaces, each rated at 0.16 MMBtu/hr;
 - (5) three (3) natural gas fired forced air furnaces, each rated at 0.15 MMBtu/hr;
 - (6) two (2) natural gas fired forced air furnaces, each rated at 0.12 MMBtu/hr.
- (c) One (1) woodworking operation with a maximum process weight rate of 11,320 pounds per hour, consisting of various woodworking equipments equipped with one (1) cyclone dust collection system for particulate matter control exhausting through one (1) stack, identified as A-2.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is not required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a minor source, as defined in 326 IAC 2-7-1(22);

- (b) It is not an affected source under Title IV (Acid Deposition Control) of the Clean Air Act, as defined in 326 IAC 2-7-1(3);
- (c) It is not a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to operate does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Modification to Permit [326 IAC 2]

All requirements and conditions of this operating permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of operating permits pursuant to 326 IAC 2 (Permit Review Rules).

B.5 Minor Source Operating Permit [326 IAC 2-6.1]

- (a) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1.1-7(Fees).
- (b) Pursuant to 326 IAC 2-6.1-7, the Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in the validation letter. If IDEM, OAM, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied. The operation permit issued shall contain as a minimum the conditions in Section C and Section D of this permit.
- (c) This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

- (a) The total source potential to emit of any criteria pollutant is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.
- (b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAQ prior to making the change.
- (c) Any change or modification which may increase:
 - (1) potential emissions of any regulated pollutant from this source to one-hundred (100) tons per year or more; or
 - (2) potential emissions of any single hazardous air pollutant (HAP) from this source to ten (10) tons per year or more; or
 - (3) potential emissions of any combination of HAPs from this source to twenty-five (25) tons per year or more,

shall cause this source to be considered a major source under Part 70 Permit Program, 326 IAC 2-7, and shall require approval from IDEM, OAQ prior to making the change.

C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Inspection and Entry [326 IAC 2-7-6(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;
- (c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).

- (c) IDEM, OAQ, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.6 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.7 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.8 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

Testing Requirements

C.9 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in

this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAQ within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

C.10 Compliance Monitoring [326 IAC 2-1.1-11]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

C.11 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.12 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 1-6]

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
 - (1) This condition;
 - (2) The Compliance Determination Requirements in Section D of this permit;
 - (3) The Compliance Monitoring Requirements in Section D of this permit;
 - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
 - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :
 - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
 - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
 - (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
 - (3) An automatic measurement was taken when the process was not operating; or

- (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken.

Record Keeping and Reporting Requirements

C.13 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.14 Annual Emission Statement [326 IAC 2-6]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
 - (1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

- (2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30. The annual emission statement must be submitted to:
- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.15 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.16 General Record Keeping Requirements [326 IAC 2-6.1-2]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAQ, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the

Permittee shall furnish the records to the Commissioner within a reasonable time.

- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this permit;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.17 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (b) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) All instances of deviations must be clearly identified in such reports. A reportable deviation

is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

- (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
- (2) A malfunction as described in 326 IAC 1-6-2; or
- (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
- (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.

- (d) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.18 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

- (d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

Victorian Homes, Division of Patriot Homes, Inc.
Middlebury, Indiana
Permit Reviewer: AY/EVP

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SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

- (a) One (1) coating operation with a maximum coating rate of 2.25 units per hour, consisting of miscellaneous volatile organic compound (VOC) containing adhesives, coatings, cements, and cleaning solvents used to assemble manufactured homes.
- (b) Twenty six (26) natural gas fired forced air furnaces with combined heat input rate of 5.58 million (MM) British thermal units (Btu) per hour, each exhausting at one (1) stack and consisting of the following:
 - (1) eight (8) natural gas fired forced air furnaces, each rated at 0.3 MMBtu/hr;
 - (2) one (1) natural gas fired forced air furnace rated at 0.25 MMBtu/hr;
 - (3) eight (8) natural gas fired forced air furnaces, each rated at 0.20 MMBtu/hr;
 - (4) four (4) natural gas fired forced air furnaces, each rated at 0.16 MMBtu/hr;
 - (5) three (3) natural gas fired forced air furnaces, each rated at 0.15 MMBtu/hr;
 - (6) two (2) natural gas fired forced air furnaces, each rated at 0.12 MMBtu/hr.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

- (a) Pursuant to CP-039-4860-00353, issued on March 11, 1996, the surface coating applied to wood furniture and/or wood components shall utilize brush or wipe application methods at all times.
- (b) Pursuant to CP-039-4860-00353, issued on March 11, 1996, the polishing compound used for touch-up or repair operations shall not exceed ten (10) gallons of coating per day. Any change or modification which may increase the VOC usage to greater than 10 gallons per day or more from the touch-up and repair operations, shall obtain prior approval from IDEM, OAQ and shall be subject to the requirements of 326 IAC 8-2-12.

D.1.2 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2 (Process Operations), particulate matter (PM) from the coating operation, shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for this emissions unit and any control devices.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.1.4 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.5 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Conditions D.1.1 and D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.6 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1 and D.1.2, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly for Condition D.1.1 and daily for Condition D.1.2 and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.1.1 and D.1.2.
 - (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (2) A log of the dates of use;
 - (3) The cleanup solvent usage for each month or each day as applicable;
 - (4) The total VOC usage for each month or each day as applicable; and
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

- (c) One (1) woodworking operation with a maximum process weight rate of 11,320 pounds per hour, consisting of various woodworking equipments equipped with one (1) cyclone dust collection system for particulate matter control exhausting through one (1) stack, identified as A-2.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

D.2.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to CP 039-4860-00353, issued on March 11, 1996, the particulate matter (PM) from the woodworking operation shall be limited to 13.09 lb/hr as determined by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

D.2.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for this emissions unit and its control device.

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.3 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.2.4 Particulate Matter (PM)

Pursuant to CP-039-4860-000353, issued on March 11, 1996, the cyclone dust collection system for PM control shall be in operation at all times when the woodworking operation is in operation.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.5 Visible Emissions Notations

- (a) Daily visible emission notations of the woodworking operation stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not

counting startup or shut down time.

- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

D.2.6 Cyclone Inspections

An inspection shall be performed each calendar quarter of all cyclones controlling the woodworking operation when venting to the atmosphere. A cyclone inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors.

D.2.7 Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

Record Keeping and Reporting Requirement [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.8 Record Keeping Requirements

- (a) To document compliance with Condition D.2.5, the Permittee shall maintain records of daily visible emission notations of the wood working operation stack exhaust.
- (b) To document compliance with Condition D.2.6, the Permittee shall maintain records of the results of the inspections required under Condition D.2.6 and the dates the vents are redirected.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Victorian Homes, Division of Patriot Homes, Inc.
Address:	11948 County Road 14, Middlebury, Indiana 46540
City:	Middlebury
Phone #:	219-825-5841
MSOP #:	039-13613-00353

I hereby certify that [Victorian Homes, Div. Of Patriot Homes, Inc.] is ☒ still in operation.
☒ no longer in operation.

I hereby certify that [Victorian Homes, Div. Of Patriot Homes, Inc.] is ☒ in compliance with the requirements of MSOP 039-13613-00353.
☒ not in compliance with the requirements of MSOP 039-13613-00353.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER - 317 233-5967**

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?____, 25 TONS/YEAR SULFUR DIOXIDE ?____, 25 TONS/YEAR NITROGEN OXIDES?____, 25 TONS/YEAR VOC ?____, 25 TONS/YEAR HYDROGEN SULFIDE ?____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?____, 25 TONS/YEAR FLUORIDES ?____, 100TONS/YEAR CARBON MONOXIDE ?____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC ____ OR, PERMIT CONDITION # ____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. () _____
LOCATION: (CITY AND COUNTY) _____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO₂, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____
INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

—
MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

PAGE 1 OF 2

**Please note - This form should only be used to report malfunctions
applicable to Rule 326 IAC 1-6 and to qualify for
the exemption under 326 IAC 1-6-4.**

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 “Malfunction” definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Minor Source Operating Permit

Source Background and Description

Source Name: Victorian Homes, Division of Patriot Homes, Inc.
Source Location: 11948 County Road 14, Middlebury, Indiana 46540
County: Elkhart
SIC Code: 2451
Operation Permit No.: 039-13613-00353
Permit Reviewer: Adeel Yousuf/EVP

The Office of Air Quality (OAQ) has reviewed a renewal application from Victorian Homes, Division of Patriot Home, Inc., relating to the operation of a manufactured homes assembly.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) coating operation with a maximum coating rate of 2.25 units per hour, consisting of miscellaneous volatile organic compound (VOC) containing adhesives, coatings, cements, and cleaning solvents used to assemble manufactured homes.
- (b) Twenty six (26) natural gas fired forced air furnaces with combined heat input rate of 5.58 million (MM) British thermal units (Btu) per hour, each exhausting at one (1) stack and consisting of the following:
 - 1) eight (8) natural gas fired forced air furnaces, each rated at 0.3 MMBtu/hr;
 - 2) one (1) natural gas fired forced air furnace rated at 0.25 MMBtu/hr;
 - 3) eight (8) natural gas fired forced air furnaces, each rated at 0.20 MMBtu/hr;
 - 4) four (4) natural gas fired forced air furnaces, each rated at 0.16 MMBtu/hr;
 - 5) three (3) natural gas fired forced air furnaces, each rated at 0.15 MMBtu/hr;
 - 6) two (2) natural gas fired forced air furnaces, each rated at 0.12 MMBtu/hr.
- (c) One (1) woodworking operation with a maximum process weight rate of 11,320 pounds per hour, consisting of various woodworking equipments equipped with one (1) cyclone dust collection system for particulate matter control exhausting through one (1) stack, identified as A-2.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Advanced Source Modification Approval

There are no new emission units during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) CP 039-4860-00353, issued on March 11, 1996;
- (b) A 039-5498-00353, issued on March 28, 1996.

All conditions from previous approvals were incorporated into this permit.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
A	0.3 MMBtu/hr forced air furnace	21.17	0.33	4.8	315
B	0.3 MMBtu/hr forced air furnace	22.67	0.33	4.8	315
C	0.3 MMBtu/hr forced air furnace	23.33	0.33	4.8	315
D	0.3 MMBtu/hr forced air furnace	22.67	0.33	4.8	315
E	0.3 MMBtu/hr forced air furnace	23.58	0.33	4.8	315
F	0.3 MMBtu/hr forced air furnace	23.5	0.33	4.8	315
G	0.25 MMBtu/hr forced air furnace	20.83	0.58	3.5	305
H	0.12 MMBtu/hr forced air furnace	22.83	0.58	1.7	265
I	0.3 MMBtu/hr forced air furnace	22.50	0.33	4.8	315
J	0.3 MMBtu/hr forced air furnace	23.21	0.33	4.8	315
K	0.16 MMBtu/hr forced air furnace	18.83	0.33	2.56	285
L	0.16 MMBtu/hr forced air furnace	19.83	0.33	2.56	285
M	0.16 MMBtu/hr forced air furnace	20.27	0.33	2.56	285
N	0.16 MMBtu/hr forced air furnace	19.79	0.33	2.56	285
O	0.15 MMBtu/hr forced air furnace	19.50	0.58	2.24	270
P	0.15 MMBtu/hr forced air furnace	20.0	0.58	2.24	270

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
Q	0.15 MMBtu/hr forced air furnace	23.58	0.33	2.24	270
R	0.20 MMBtu/hr forced air furnace	23.63	0.33	2.96	285
S	0.20 MMBtu/hr forced air furnace	23.54	0.33	2.96	285
T	0.20 MMBtu/hr forced air furnace	23.25	0.33	2.96	285
U	0.20 MMBtu/hr forced air furnace	23.17	0.33	2.96	285
V	0.12 MMBtu/hr forced air furnace	14.08	0.33	1.68	265
W	0.20 MMBtu/hr forced air furnace	22.50	0.67	2.96	285
X	0.20 MMBtu/hr forced air furnace	23.00	0.67	2.96	285
Y	0.20 MMBtu/hr forced air furnace	20.17	0.67	2.96	285
Z	0.20 MMBtu/hr forced air furnace	20.08	0.67	2.96	285
A-2	Cyclone Dust Collector	27.17	1.0	4784	71

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on December 13, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 through 6).

Potential To Emit (of Source or Revision) Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	93.35
PM-10	93.50
SO ₂	0.00
VOC	84.17
CO	2.10
NO _x	2.40

HAP's	Potential To Emit (tons/year)
MEK	3.50
MDI	4.05
Hexane	2.02
Methanol	0.04
Methylene Chloride	0.07
Xylene	6.77
Toluene	1.01
Glycol Ethers	1.53
TOTAL	18.99

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any criteria pollutant is equal to or less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7 do not apply.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (c) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	maintenance
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as maintenance attainment for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

- (b) Elkhart County has been classified as attainment or unclassifiable for for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	5.35
PM10	5.50
SO ₂	0.00
VOC	84.7
CO	2.10
NO _x	2.40
Single HAP	6.77
Total HAPs	19.0

- (a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, with the total emissions indicated in this permit CP-039-13613-00353, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAQ inspector assigned to the source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

Pursuant to CP 039-4860-00353, issued on March 11, 1996, this source is subject to 326 IAC 2-6 (Emission Reporting), because it is located in Elkhart County and has the potential to emit more than ten (10) tons per year for of VOC. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The coating operation will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 6-3-2 (Process Operations)

- (a) Pursuant to CP 039-4860-00353, issued on March 11, 1996, the particulate matter (PM) from the woodworking operation shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

$$E = 4.10 * (5.66)^{0.67} = 13.09 \text{ lbs PM/hour}$$

Based on the above equation, particulate matter emissions from the woodworking operation shall be limited to 5.04 pounds per hour.

Compliance calculation:

$$(5.35 \text{ tons PM/yr}) * (\text{yr}/8,760 \text{ hrs}) * (2,000 \text{ lbs/ton}) = 1.22 \text{ lbs PM/hr}$$

Actual lbs PM/hr (1.22) is less than the allowable lbs PM/hr (13.09), therefore the woodworking operation will comply with the requirements of 326 IAC 6-3-2.

The cyclone dust collection system shall be in operation at all times the wood working operation is in operation, in order to comply with this limit.

- (b) Pursuant to 326 IAC 6-3-2 (Process Operations), particulate matter (PM) from the paint

booth, identified as PB-1, shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The dry filters shall be in operation at all times the paint booth (PB-1) is in operation, in order to comply with this limit.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

Pursuant to CP-039-4860-00353, issued on March 11, 1996, the coating operation is not subject to this rule, because the facility does not coat metal parts or products. Therefore, this operation will be exempted from the requirements of 326 IAC 8-2-9.

326 IAC 8-1-6 (General Reduction Requirements)

Pursuant to CP-039-4860-00353, issued on March 11, 1996, this source is not subject to this rule, because the facility commenced operations in 1974. Therefore, the requirements under 326 IAC 8-1-6 do not apply.

326 IAC 8-2-12 (Wood Furniture and Cabinet Coating)

- (a) Pursuant to CP-039-4860-00353, issued on March 11, 1996, this rule is applicable to the coating operation at the source because potential VOC emissions from the operation are greater than twenty-five (25) tons per year. The coatings applied to wood furnishings shall utilize brush or wipe application methods at all times, or utilize one of the approved methods specified in the rule.
- (b) Pursuant to CP-039-4860-00353, issued on March 11, 1996, the requirements under 326 IAC 8-2-12 do not apply to applications systems which use less than ten (10) gallons of coating per day for touch-up and repair operations. Since maximum potential material usage of the aerosol polishing compound, Shine-Up Lemon is 0.54 gallons per day, the requirements under 326 IAC 8-2-12 do not apply.

326 IAC 8-6 (Organic Solvent Emission Limitations)

Pursuant to CP-039-4860-00353, issued on March 11, 1996, this source, which commenced operations in 1974, is not subject to 326 IAC 8-6 since potential VOC emissions are less than 100 tons per year.

Testing Requirements

- (a) Stack testing for the coating operation is not required because the potential VOC and PM emissions are calculated to be 84.17 and 3.5 based on the material balance, and there are no control devices controlling this operation.
- (b) Stack testing for the woodworking operation is not required because the uncontrolled potential PM emissions are 20.5 lbs PM/hr, and the controlled PM emissions (after the control of cyclone) from the operation are 1.22 pounds per hour, which are much less than the allowable 13.09 lbs PM/hr, and the cyclone shall be in operation at all times when the woodworking is in operation.

Conclusion

The operation of this manufactured homes assembly plant shall be subject to the conditions of the attached proposed renewal **Minor Source Operating Permit 039-13613-00353**.

Appendix A: Emission Calculations

Company Name: Victorian Home, Division of Patriot Homes, Inc.
Address City IN Zip: 11948 County Road 14, Middlebury, Indiana 46540
MSOP: 039-13613
Plt ID: 039-00353
Reviewer: Adeel Yousuf / EVP
Date: February 15, 2001

Uncontrolled Potential Emissions (tons/year)				
Emissions Generating Activity				
Pollutant	Surface Coating	Woodworking Operation	Natural Gas Combustion	TOTAL
PM	3.50	89.80	0.05	93.35
PM10	3.50	89.80	0.20	93.50
SO2	0.00	0.00	0.00	0.00
NOx	0.00	0.00	2.40	2.40
VOC	84.07	0.00	0.10	84.17
CO	0.00	0.00	2.10	2.10
total HAPs	18.95	0.00	0.05	19.00
worst case single HAP	(Xylene) 6.77	0.00	(Hexane) 0.04	(Xylene) 6.77
Total emissions based on rated capacity at 8,760 hours/year				
Controlled Potential Emissions (tons/year)				
Emissions Generating Activity				
Pollutant	Surface Coating	Woodworking Operation	Natural Gas Combustion	TOTAL
PM	3.50	1.80	0.05	5.35
PM10	3.50	1.80	0.20	5.50
SO2	0.00	0.00	0.00	0.00
NOx	0.00	0.00	2.40	2.40
VOC	84.07	0.00	0.10	84.17
CO	0.00	0.00	2.10	2.10
total HAPs	18.95	0.00	0.05	19.00
worst case single HAP	(Xylene) 6.77	0.00	(Hexane) 0.04	0.00
Total emissions based on rated capacity at 8,760 hours/year, after control				

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Small Industrial Boiler

Company Name: Victorian Home, Division of Patriot Homes, Inc.

Address City IN Zip: 11948 County Road 14, Middlebury, Indiana 46540

CP: 039-13613

Plt ID: 039-00353

Reviewer: Adeel Yousuf / EVP

Date: February 15, 2001

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

5.6

48.9

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.05	0.2	0.0	2.4	0.1	2.1

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only**

Page 3 of 6 TSD App A

MM BTU/HR <100

Small Industrial Boiler

HAPs Emissions

Company Name: Victorian Home, Division of Patriot Homes, Inc.
Address City IN Zip: 11948 County Road 14, Middlebury, Indiana 46540
CP: 039-13613
Plt ID: 039-00353
Reviewer: Adeel Yousuf / EVP
Date: February 15, 2001

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	5.132E-05	2.933E-05	1.833E-03	4.399E-02	8.310E-05

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	1.222E-05	2.688E-05	3.422E-05	9.287E-06	5.132E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Page 4 of 6 TSD App A

Company Name: Victorian Homes, Division of Patriot Home, Inc.
Address City IN Zip: 11948 County Rd 14, Middlebury, Indiana 46540
MSOP: 039-13613
Plt ID: 087-00353
Reviewer: AY/EVP
Date: February 19, 2001

Material	Type of Material(s) Coated	I.D. Number	Density (lbs/gal)	Weight % Volatile (H ₂ O & organics)	Weight % Water	Weight % Organics	Volume % Water	Vol % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (units/hr)	Pounds VOC per Gallon of Coating Less Water	Pounds VOC Per Gallon of Coating	Potential VOC Pounds per Hour	Potential VOC Pounds per Day	Potential VOC Tons per Year	Particulate Potential (tons/yr)	lbs VOC /gal solids	Transfer Efficiency
State Potential Emissions (uncontrolled)																		
Cleaner	Formica	Citrus Based	6.54	90.00%	1.10%	88.90%	0.10%	6.50%	0.030	2.25	5.82	5.81	0.39	9.42	1.72	0.10	178.89	50%
Adhesive	Formica or ceramic tile	Duraseal	13.60	17.30%	15.30%	2.00%	24.90%	0.00%	0.010	2.25	0.36	0.27	0.01	0.15	0.03	0.00	FRR	100%
Solvent	Gun Cleaner	GC-33	8.20	100.00%	0.00%	100.00%	0.00%	0.00%	0.001	2.25	8.20	8.20	0.02	0.44	0.08	0.00	FRR	100%
Cleaner	Tools	3M Silicone Lubricant	5.34	94.80%	0.10%	94.70%	0.10%	3.15%	0.010	2.25	5.06	5.06	0.11	2.73	0.50	0.01	321.08	50%
Cleaner	Windows and Carpet	Crazy Clean	8.36	93.10%	85.20%	7.90%	83.40%	7.90%	0.001	2.25	3.98	0.66	0.00	0.04	0.01	0.00	16.72	50%
Cleaner	Gun and Tool	Cyclo Breakaway C-10/C-12	6.93	21.80%	0.00%	21.80%	0.00%	78.20%	0.001	2.25	1.51	1.51	0.00	0.08	0.01	0.03	3.86	50%
Caulk	Vinyl Siding and Glass	Acrylic Latex Caulk	14.40	13.84%	12.77%	1.07%	21.43%	76.05%	0.090	2.25	0.20	0.15	0.03	0.75	0.14	0.00	0.20	100%
Solvent	Clean Tools	Mineral Spirits	6.40	100.00%	0.00%	100.00%	0.00%	0.00%	0.110	2.25	6.40	6.40	1.58	38.02	6.94	0.00	FRR	100%
Sealant	Glass	FNFR 10	7.98	95.80%	0.00%	95.80%	0.00%	4.20%	0.001	2.25	7.64	7.64	0.02	0.41	0.08	0.00	364.04	50%
Cleaner	Glass	Glass Cleaner	7.98	99.70%	76.70%	23.00%	70.90%	70.90%	0.060	2.25	6.31	1.84	0.25	5.95	1.09	0.01	5.18	50%
Cleaner	Wood	Shine-Up Lemon	7.30	96.70%	71.90%	24.80%	63.10%	2.90%	0.010	2.25	4.91	1.81	0.04	0.98	0.18	0.01	124.86	50%
Adhesive	Wood	Manus-Bond	8.50	30.00%	0.00%	30.00%	0.00%	70.00%	0.202	2.25	2.55	2.55	1.16	27.82	5.08	0.00	3.64	100%
Sealant	ABS	Rectorseal No. 5	10.80	23.00%	0.00%	23.00%	0.00%	76.00%	0.010	2.25	2.48	2.48	0.06	1.34	0.24	0.00	3.27	100%
Adhesive	ABS	Weld-On 773	7.22	80.00%	0.00%	80.00%	0.00%	20.00%	0.060	2.25	5.78	5.78	0.78	18.71	3.42	0.00	28.88	100%
Coating	Wood	Speed E-Namel	5.83	86.00%	0.00%	86.00%	0.00%	9.00%	0.008	2.25	5.01	5.01	0.09	2.17	0.40	0.03	111.42	50%
Coating	Metal	Spray 'N Go	6.11	91.30%	0.01%	91.29%	0.01%	8.72%	0.001	2.25	5.58	5.58	0.01	0.30	0.05	0.00	127.91	50%
Cement	Roof Paper & Shingles	Grundy Cold	8.80	23.31%	0.00%	23.31%	0.00%	68.46%	2.500	2.25	2.05	2.05	11.54	276.92	50.54	0.00	3.00	100%
Cement	Shingles & Skylight	Grundy Plastic	9.60	19.71%	0.00%	19.71%	0.00%	70.90%	0.360	2.25	1.89	1.89	1.53	36.78	6.71	0.00	2.67	100%
Cement	Plastic	Carlton PVC Solvent	7.96	73.00%	0.05%	72.95%	0.05%	27.00%	0.002	2.25	5.81	5.81	0.03	0.63	0.11	0.00	21.51	100%
Adhesive	Wood & Formica	Con-Bond 773	6.70	79.50%	0.00%	79.50%	0.00%	13.60%	0.070	2.25	5.33	5.33	0.84	20.13	3.67	0.00	39.17	100%
Solvent	Gypsum & Wood	FNFR 42	10.00	0.00%	0.00%	0.00%	0.00%	100.00%	0.067	2.25	0.00	0.00	0.00	0.00	0.00	3.31	0.00	50%
Adhesive	Linoleum & Wood	S-235	10.00	38.00%	38.00%	0.00%	38.00%	62.00%	0.150	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Adhesive	Vinyl	Construction 920	13.60	17.30%	15.30%	2.00%	24.90%	81.00%	0.010	2.25	0.36	0.27	0.01	0.15	0.03	0.00	0.34	100%
Adhesive	Wood	IN.T.A.C. - GP17	9.44	62.60%	61.61%	0.99%	39.30%	30.70%	3.250	2.25	0.15	0.09	0.68	16.40	2.99	0.00	0.30	100%
Adhesive	Gypsum & Wood	Pemco 5100	9.45	0.00%	0.00%	0.00%	0.00%	100.00%	0.830	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Adhesive	Gypsum & Wood	F2100A	10.24	0.00%	0.00%	0.00%	0.00%	100.00%	2.496	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Solvent	Tool Cleaner	Brake & Parts Cleaner	6.21	100.00%	0.00%	100.00%	0.00%	0.00%	0.001	2.25	6.21	6.21	0.01	0.34	0.06	0.00	FRR	50%

Total Potential Emissions: **19.19** **460.65** **84.07** **3.50**

Federal Potential Emissions (controlled)

										Control Efficiency:		Controlled VOC Pounds per Hour	Controlled VOC Pounds per Day	Controlled VOC Tons per Year	Controlled Particulate ton/yr	
										VOC	PM					
Total Controlled Emissions:										0.00%	0.00%	19.19	460.65	84.07	3.50	

Methodology

Pounds of VOC per Gallon Coating Less Water = (Density (lbs/gal) * Weight % Organics) / (1 - Volume % Water)

Pounds of VOC per Gallon Coating = Density (lbs/gal) * Weight % Organics

Potential VOC Pounds per Hour = Pounds of VOC per Gallon Coating * Gallons of Material (gal/unit) * Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon Coating * Gallons of Material (gal/unit) * Maximum (units/hr) * 24 (hrs/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon Coating * Gallons of Material (gal/unit) * Maximum (units/hr) * 8,760 (hrs/yr) * (1 ton/2,000 lbs)

Particulate Potential Tons per Year = Maximum (units/hr) * Gallons of Material (gal/unit) * Density (lbs/gal) * (1 - Weight % Volatiles) * (1 - Transfer Efficiency) * 8,760 (hrs/yr) * (1 ton/2,000 lbs)

Pounds of VOC per Gallon of Solids = Density (lbs/gal) * Weight % Organics / (Volume % Solids * Transfer Efficiency)

Total Potential Emissions: Assumes the sum of all coatings and solvents used, based on 8,760 hours of operation per year. All materials reflect "as applied" by the applicator.

Appendix A: Emission Calculations (HAP Emission Calculations)

Page 5 of 6 TSD App A

Company Name: Victorian Homes, Division of Patriot Home, Inc.
Address City IN Zip: 11948 County Rd. 14, Middlebury, Indiana 46540
MSOP#: 039-13613
Pit ID: 067-00353
Permit Reviewer: AY/EVP

Coating or Solvent	Paint Booth ID Number (s)	Amount used per unit (gal/unit)	Production units per hour (units/hr)	Annual Usage (gal/yr)	Coating or Solvent Density (lbs/gal)	Annual Weight of coating or solvent used (lbs/yr)	MDI	MEK	Hexane	Methanol	Methylene Chloride	Xylene	Toluene	Glycol Ethers	All Toxics
							Weight % (tons/yr)	Weight % (tons/yr)	Weight % (tons/yr)	Weight % (tons/yr)	Weight % (tons/yr)	Weight % (tons/yr)	Weight % (tons/yr)	Weight % (tons/yr)	Weight % (tons/yr)
Cement (as applied)	Carlton PVC Solvent	0.002	2.25	39	7.96	314	0.0%	48.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.08
Adhesive (as applied)	Con-Bond 773	0.070	2.25	1,380	6.70	9,244	0.0%	0.1%	42.9%	0.0%	0.0%	0.0%	20.0%	0.0%	2.91
Solvent (as applied)	Brakes & Parts Cleaner	0.001	2.25	20	6.21	122	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.0%	0.0%	0.01
Solvent (as applied)	GC-33	0.001	2.25	20	8.20	162	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	60.0%	0.05
Cleaner (as applied)	Citrus Based	0.030	2.25	591	6.54	3,867	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	64.0%	1.24
Cleaner (as applied)	3M Silicone Lubricant	0.010	2.25	197	5.34	1,053	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00
Cement (as applied)	Cold Cement	2.500	2.25	49,275	8.80	433,620	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00
Cement (as applied)	Plastic Cement	0.360	2.25	7,096	9.60	68,118	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00
Cleaner (as applied)	Crazy Clean	0.001	2.25	20	8.36	165	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00
Cleaner (as applied)	Cyclo Breakaway	0.001	2.25	20	6.93	137	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00
Caulk (as applied)	Acrylic Latex	0.090	2.25	1,774	14.40	25,544	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00
Sealant (as applied)	Duraseal	0.010	2.25	197	13.60	2,681	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00
Sealant (as applied)	ENER 10	0.001	2.25	20	7.98	157	0.0%	0.0%	0.0%	0.0%	9.0%	0.0%	0.0%	0.0%	0.01
Cleaner (as applied)	Glass Cleaner	0.060	2.25	1,183	7.96	9,437	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.04
Cleaner (as applied)	Shine-Up Lemon	0.010	2.25	197	7.30	1,439	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00
Adhesive (as applied)	Manus-Bond	0.202	2.25	3,981	8.50	33,842	0.0%	0.0%	0.0%	0.0%	0.0%	40.0%	0.0%	0.0%	6.77
Sealant (as applied)	Rectorseal No. 5	0.010	2.25	197	10.80	2,129	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.0%	0.24
Coating (as applied)	Speed E-Name!	0.008	2.25	158	5.83	919	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	13.0%	0.0%	0.06
Coating (as applied)	Spray 'N Go	0.001	2.25	20	6.11	120	0.0%	10.0%	0.0%	0.0%	0.0%	5.0%	20.0%	0.0%	0.02
Adhesive (as applied)	Weld-On 773	0.060	2.25	1,183	7.22	8,538	0.0%	80.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.42
Solvent (as applied)	ENER 42	0.067	2.25	1,323	10.00	13,225	60.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	4.03
Adhesive (as applied)		0.150	2.25				3.97	0.00	0.00	0.00	0.07	0.000	0.00	0.00	
Adhesive (as applied)	S-235	0.150	2.25	2,960	10.00	29,604	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00
Adhesive (as applied)							0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	
Adhesive (as applied)	Construction 920	0.010	2.25	197	13.60	2,681	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00
Adhesive (as applied)							0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.00	
Adhesive (as applied)	IN.T.A.C. - GP17	3.250	2.25	64,058	9.44	604,703	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00
Adhesive (as applied)							0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.00	
Adhesive (as applied)	PEMCO 5100	0.830	2.25	16,359	9.45	154,595	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.08
Adhesive (as applied)							0.08	0.00	0.00	0.00	0.000	0.00	0.00	0.00	
Adhesive (as applied)	F2100A	2.496	2.25	49,196	10.24	503,769	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00
Adhesive (as applied)							0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.00	
Cleaner (as applied)	Mineral Spirits	0.110	2.25	2,168	6.40	13,876	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00

Total Potential HAP Emissions (as applied by the applicator):

(tons/yr)	4.05	3.50	1.98	0.04	0.07	6.77	1.01	1.53	18.95
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Methodology:

Total Potential HAP Emissions assumes the sum of all coatings and cleaning agents used, based on 8,760 hours of operation per year, as applied to the applicators.

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

** Potential MDI emissions from the coating materials Pemco Adhesive and Foamseal (I.D. Number F2100A) based on engineering documentation supplied by each manufacturer.

Appendix A: Emissions Calculations
Particulate Matter (PM) Emissions
Wood Working Operations

Page 6 of 6 TSD App A

Company Name: Victorian Homes, Division of Patriot Home, Inc.
Address City IN Zip: 11948 County Rd. 14 , Middlebury, Indiana 46540
MSOP: 039-13613
Pit ID: 087-00353
Reviewer: AY/EVP
Date: February 19, 2001

PM/PM10:	0.01 gr/acf outlet x	4784 acf/min x	60 min/hr /	7000 gr/lb x	4.38 ton/yr / lb/hr	0.02 (1- control efficiency) =	89.80 tons/yr (uncontrolled)
	where the baghouse control efficiency is listed at		98.00%				1.80 tons/yr (controlled)

Methodology

Uncontrolled PM/PM10 = grain loading (gr/acf outlet) * Flow rate (acfm) * (60 min/hr) * (1 lb/7000 gr) * 4.38 (tons/yr / lb/hr) / (1- control efficiency %)